

General Description

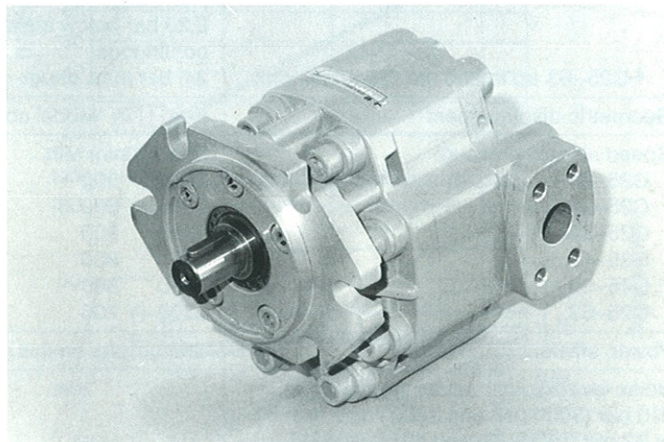
Single pumps are of a three-section modular design wherein all housings are made of aluminium castings.

Multiple units consist of two or more pump sections driven via a common input shaft. Double pumps are furnished with a single common inlet. Triple and quadruple pumps normally have one less inlet than the total number of sections. Each pump section has a separate outlet.

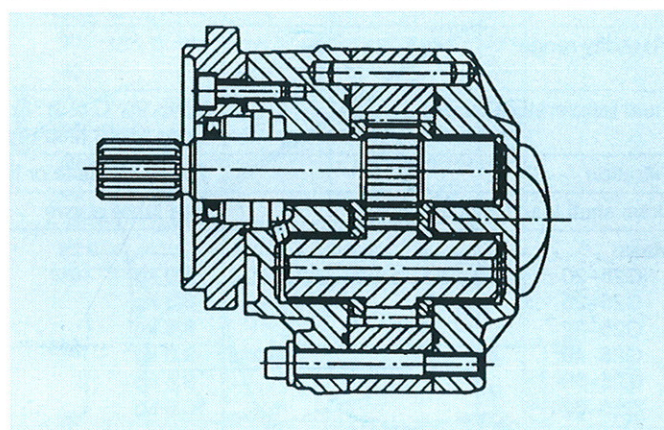
Besides offering greater design flexibility to hydraulic systems designers, multiple pumps reduce installation costs and required installation space since they allow multi-pump operation from a single mounting and drive point. Multiple pumps also offer greater reliability and less chance of leakage because inlets are always one less in number than outlets.

Pumps can be provided with a splined SAE side fit shaft or straight-keyed shaft. Pumps are assembled for either clockwise or counter-clockwise rotation.

The 14 teeth gear and the drive shaft are combined in a single forging. This eliminates the potential problems of fretting and stress fatigue associated with two-piece constructions and provides pump operation at low sound level.



Cross section



Model code

G25- ** (-**)(-**)(-**)

1 2 3 4

- * (F) * F* -10 - *

5 6 7 8 9 10

1 Geometric displacement

Single pump or largest displacement section (shaft end) of multiple pumps

20 = 21,3 cm³/r

25 = 25,8 cm³/r

32 = 32,7 cm³/r

40 = 41,0 cm³/r

50 = 50,9 cm³/r

63 = 63,8 cm³/r

2 Geometric displacement

3 Successive sections of multiple pumps.

4 Displacement of each section to be equal or less than that of the previous

section. Displacement range as in 1.
Omit for single pumps and as appropriate for double and triple pumps.

5 Mounting flange

B = SAE "B" 2-hole oval and 4-hole square combined (ISO 3019/1)

C = SAE "C" 2-hole oval and 4-hole square combined (ISO 3019/1)

6 Drive shaft bearing

F = With front shaft bearing

Omit for standard pumps

7 Drive shaft end

Code	Shaft type	Usage with mounting flange 5
1	Cylindrical (SAE "B")	Option with type "B"
2	Cylindrical (SAE "C")	Option with type "B" and "C"
6	Splined (SAE "B")	Option with type "B"
7	Splined (SAE "C")	Option with type "B" and "C"

8 Flanged port combinations, 4-bolt type

Code	Type	Type	Pump Mounting flange 5
F1	SAE	Single	"B" & "C"
F4	SAE	Multiple	"B" & "C"

9 Design number

10 series

Subject to change. Installation dimensions unaltered for design numbers 10 to 19 inclusive.

10 Direction of shaft rotation

(Viewed at input shaft end)

R = Clockwise

L = Counterclockwise

Operating data

Performance data is typical with fluid at 30 cst (141 SUS) and 42°C (108°F) unless stated otherwise.

Operating pressure at outlet at inlet	Max. 250 bar (3560 psi) [▲] 0,35 bar below atmospheric pressure for short time. 0,20 bar below atmospheric pressure continuous. 2,0 bar max. gauge pressure.
[▲] G25-63 up to 200 bar (2840 psi) only	
Geometric displacement	See [1] in "Model code"
Speed at max. pressure	Max. (r/min) Min.
G25-20	3300 900
G25-25	3300 900
G25-32	3150 900
G25-40	3000 900
G25-50	2850 800
G25-63	2700 700
Power, efficiency and torque	See graphs on this page
Noise level, typical values measured at 210 bar (3000 psi) and 2300 r/min with oil at 32 cSt (150 SUS) and 42°C (108°F)	
G25-20	67 dB (A)
G25-40	72 dB (A)
Hydraulic fluids	We recommend antiwear HL- and HLP-hydraulic fluids according DIN 51 524.
Viscosity range	Min. 7 cSt Max. 750 cSt
Fluid temperature range	Up to 95°C (201°F) continuous Up to 110°C (230°F) short time
Filtration	25 µm absolute or finer
Drive shaft load limits	See table above
Mass	
G25-20	8,0 kg
G25-25	8,3 kg
G25-32	8,6 kg
G25-40	9,0 kg
G25-50	9,4 kg
G25-63	10,0 kg
Installation dimensions	See page 5

Drive shaft load limits-

For all pumps—singles and multiples—check that both the shaft and interstage coupling(s) loadings for each application do not exceed the following limits.

Where:

$$\text{Load} = p_1 \times V_1 + p_2 \times V_2 + p_3 \times V_3 + \dots$$

For max. total shaft load without front bearing $\leq 1,5 \times 10^4$

For max. coupling load:

$$p_2 \times V_2 + p_3 \times V_3 \dots \leq 1,5 \times 10^4$$

For max. total shaft load without front bearing

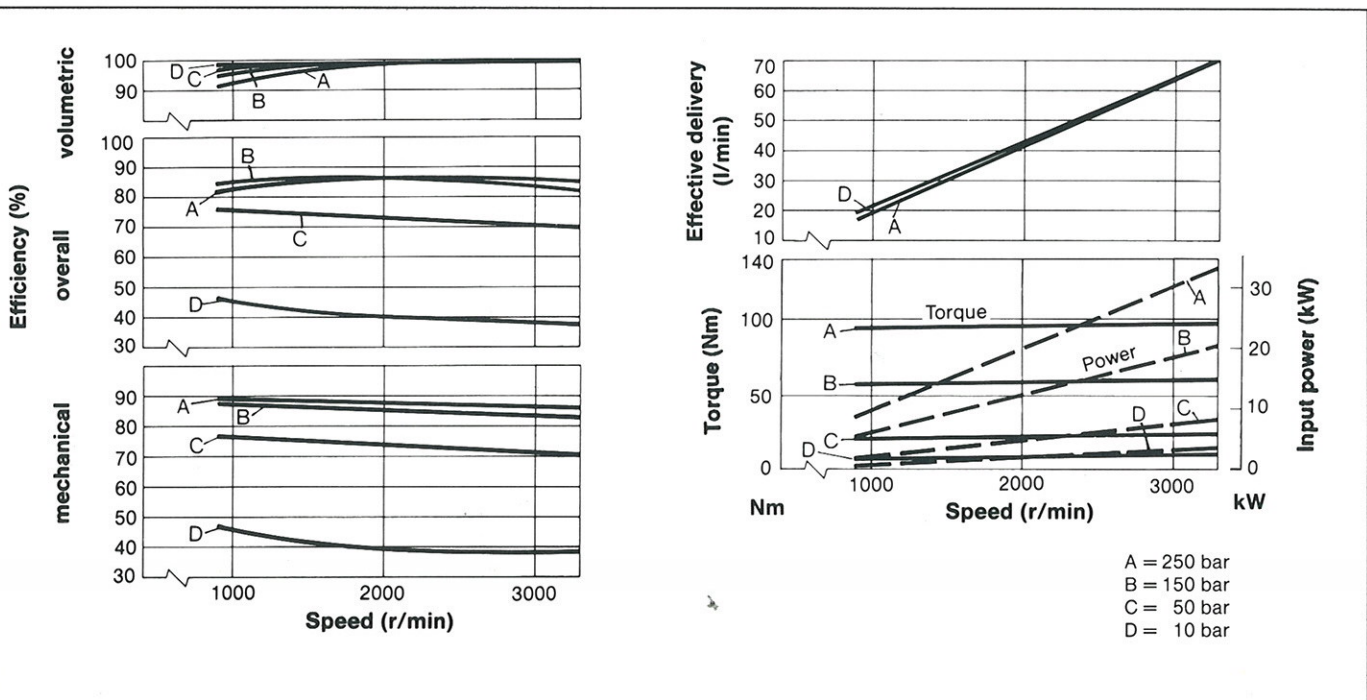
Drive shaft load limitations

Drive Shaft No.	Max. Total Shaft Load	Max. Coupling Load
'1'	$\leq 2.15 \times 10^4$	$\leq 1.5 \times 10^4$
'2'	$\leq 2.80 \times 10^4$	$\leq 1.5 \times 10^4$
'6'	$\leq 1.55 \times 10^4$	$\leq 1.5 \times 10^4$
'7'	$\leq 2.80 \times 10^4$	$\leq 1.5 \times 10^4$

p = Outlet pressure in bar (psi)

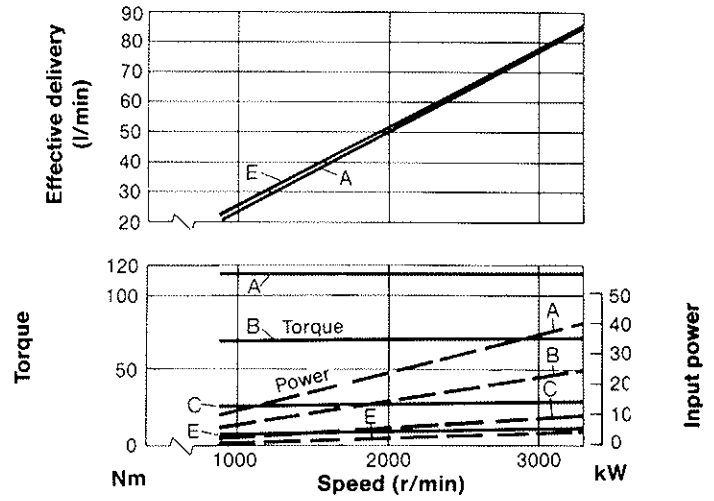
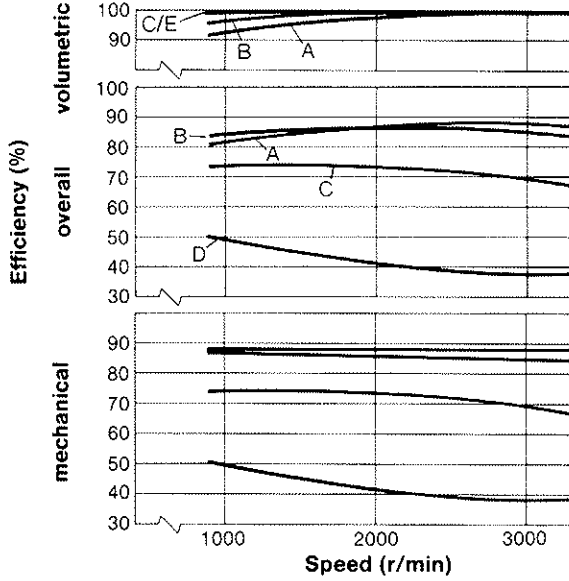
V = Pump displacement in cm^3/r (in^3/r)

Efficiency, torque and power input for type G25 - 20

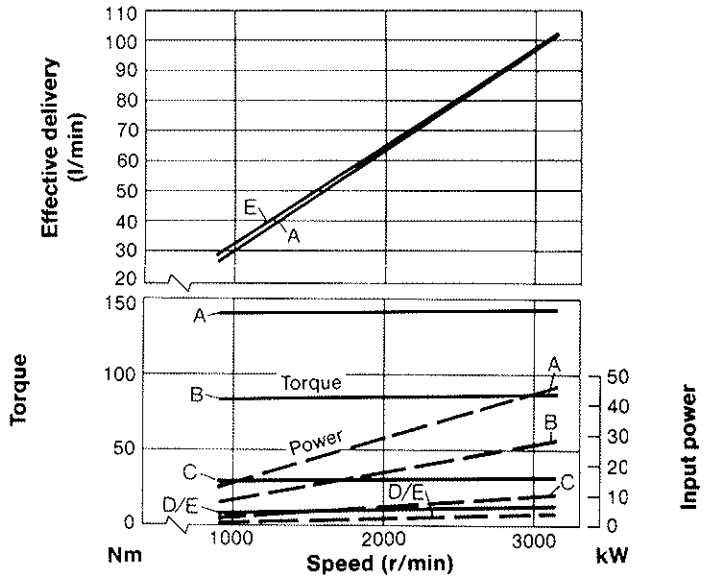
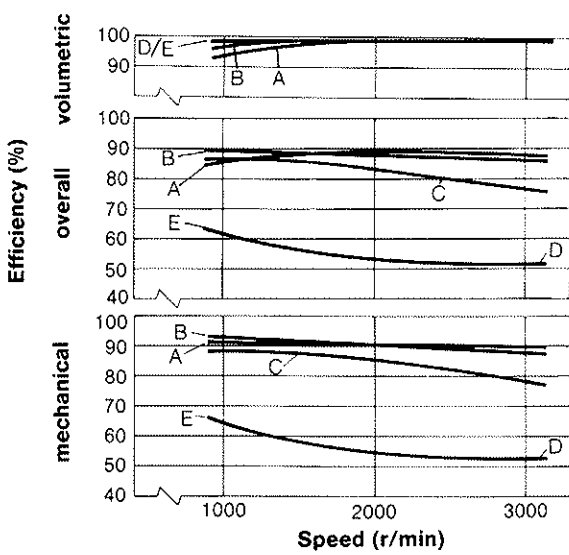


Efficiency, torque and power input for types G25 - 25, G25 - 32 und G25 - 40

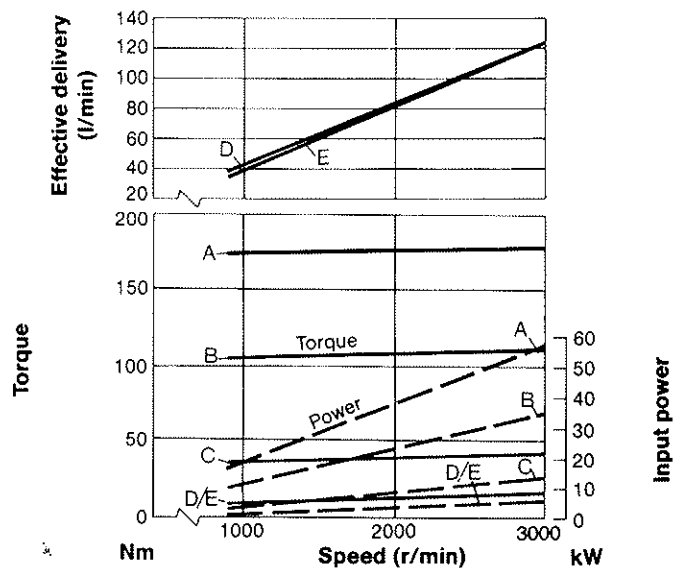
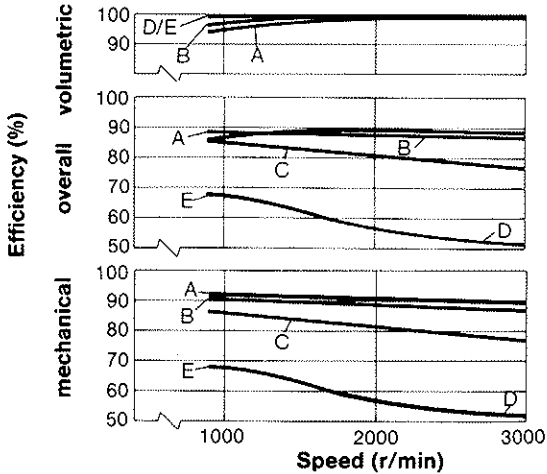
G25-25



G25-32



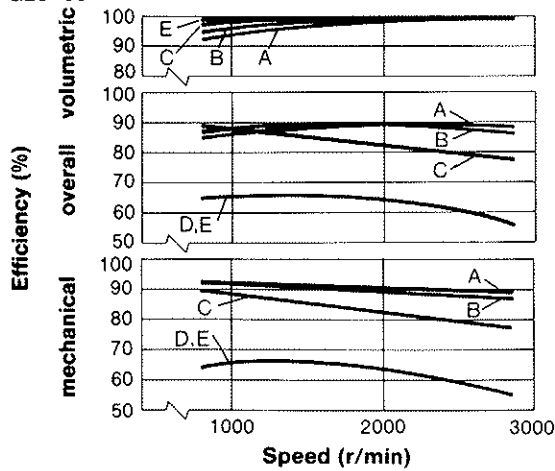
G25-40



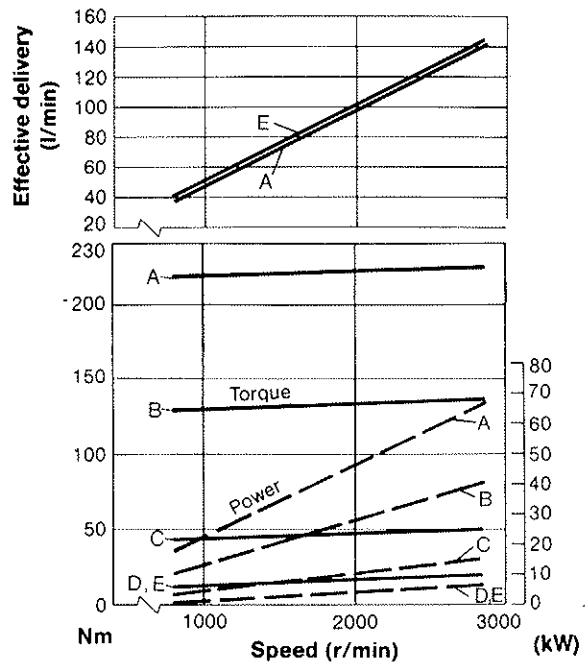
- A = 250 bar
- B = 150 bar
- C = 50 bar
- D = 15 bar
- E = 10 bar

Efficiency, torque and power input for types G25 - 50 und G25 - 63

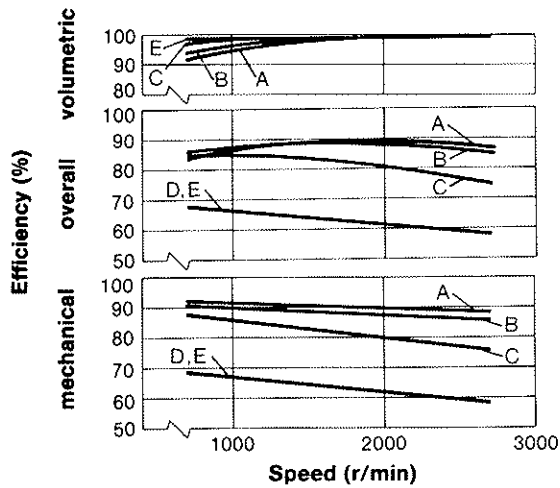
G25-50



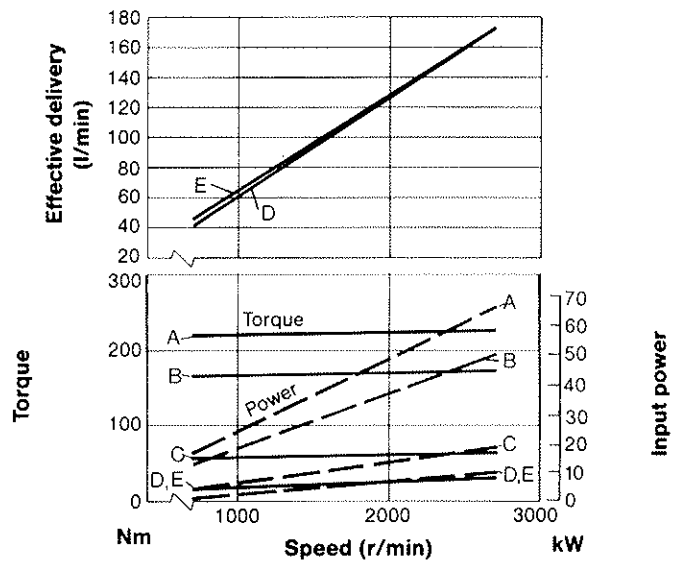
- A = 250 bar
- B = 150 bar
- C = 50 bar
- D = 15 bar
- E = 10 bar



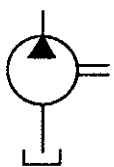
G25-63



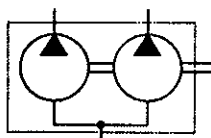
- A = 200 bar
- B = 150 bar
- C = 50 bar
- D = 20 bar
- E = 10 bar



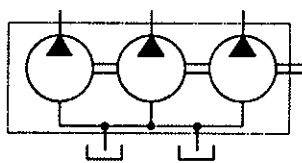
Symbols



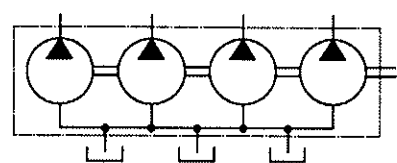
Single pump



Double pump



Triple pump



Quadruple pump

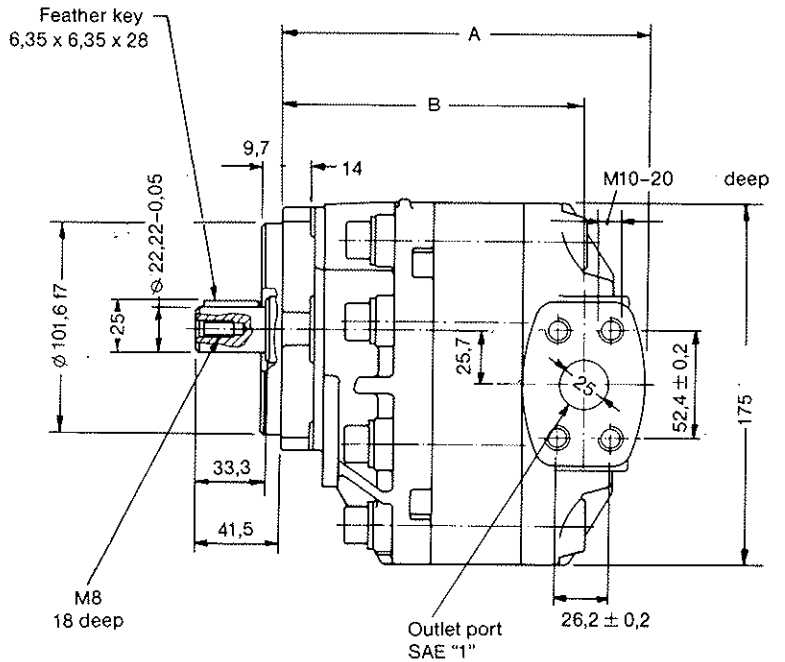
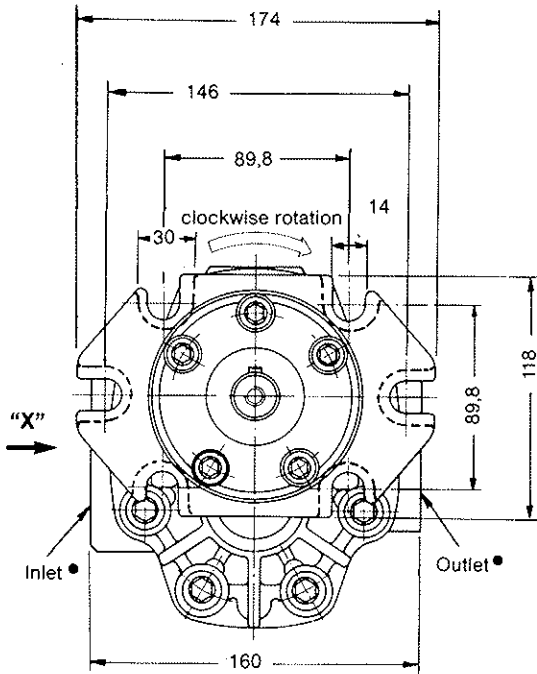
Installation dimensions for single pumps (in mm)



G25 Single pumps

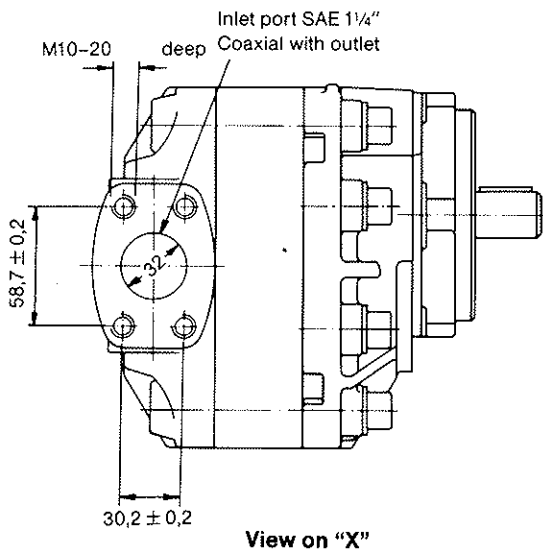
G25-**-B*F1 models
SAE "B" flange size

Shaft type "1"



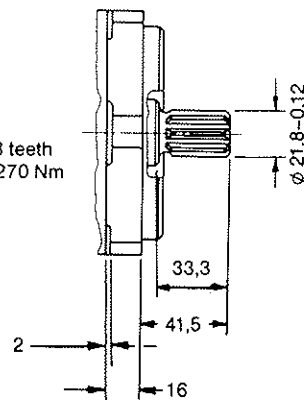
With front shaft bearing version only

• For anti-clockwise rotation the inlet and outlet port locations are interchanged



Shaft type "6"

Splined shaft
SAE "B"
side fit
16/32 DP - 13 teeth
Torque max. 270 Nm



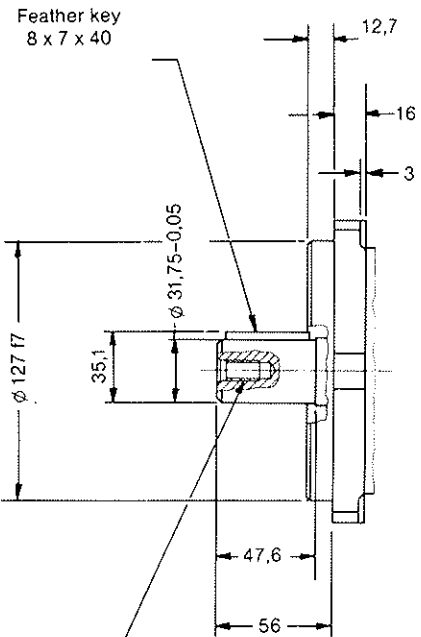
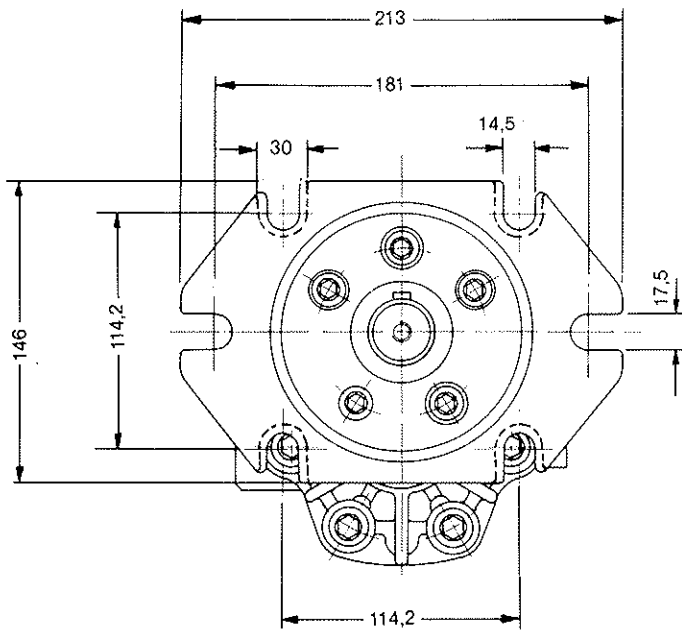
Model	Dim's A	Dim's B
G25-20	163,5	133,5
G25-25	166,5	136,5
G25-32	171,0	141,0
G25-40	176,5	146,5
G25-50	183,0	153,0
G25-63	191,5	161,5

Installation dimensions for SAE »C« - flange (in mm)

G25-**-C*F1 models

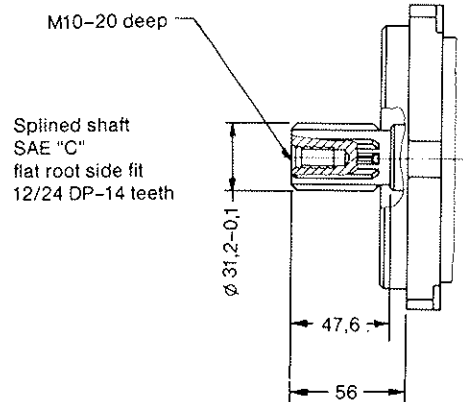
SAE "C" flange size

Shaft type "2"



With front shaft bearing version only

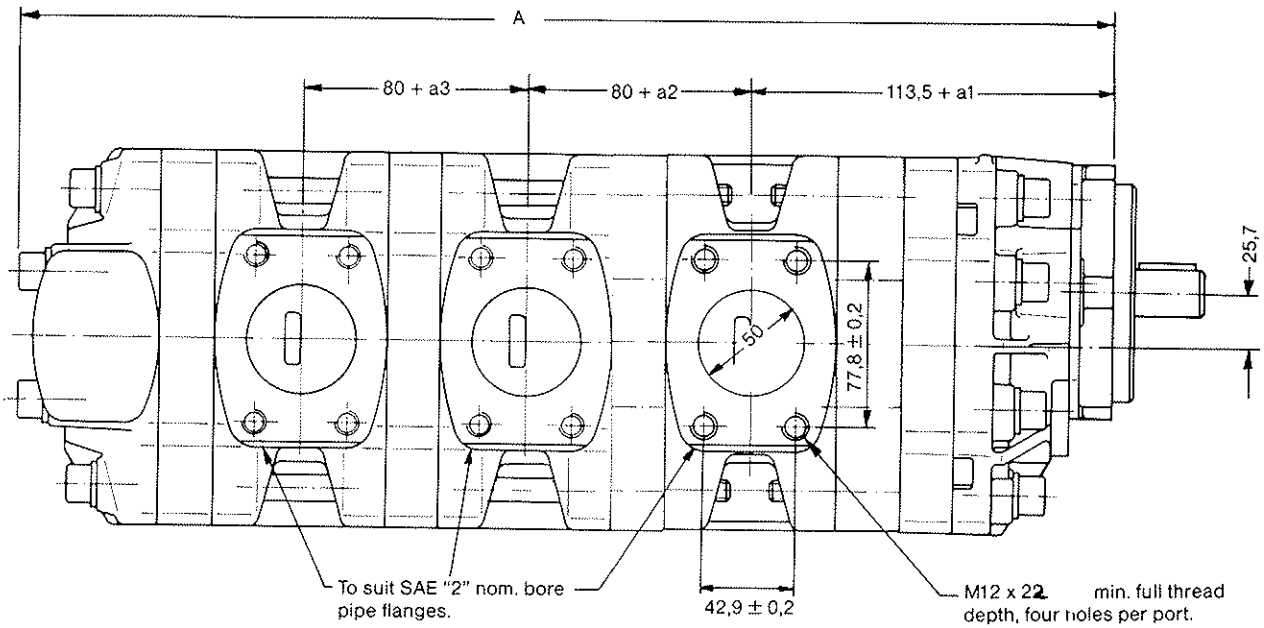
Shaft type "7"



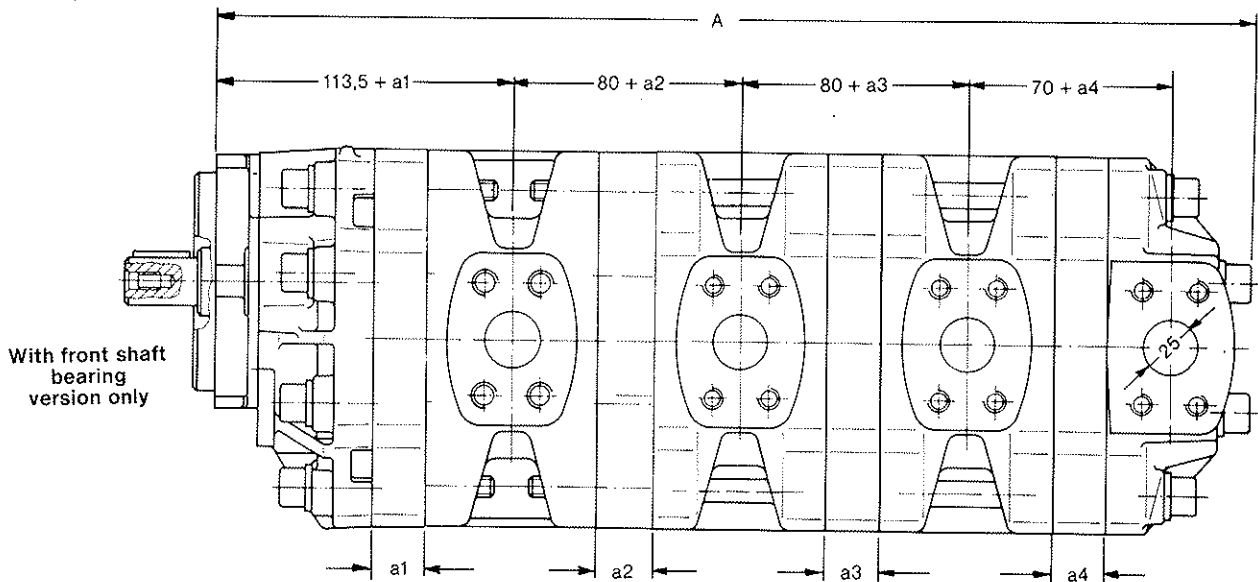
Installation dimensions for multiple pumps (in mm)

G25 multiple pumps, all models

Inlet port side •



Outlet port side •



• For clockwise rotation pumps.
Interchanged on anti-clockwise rotation models

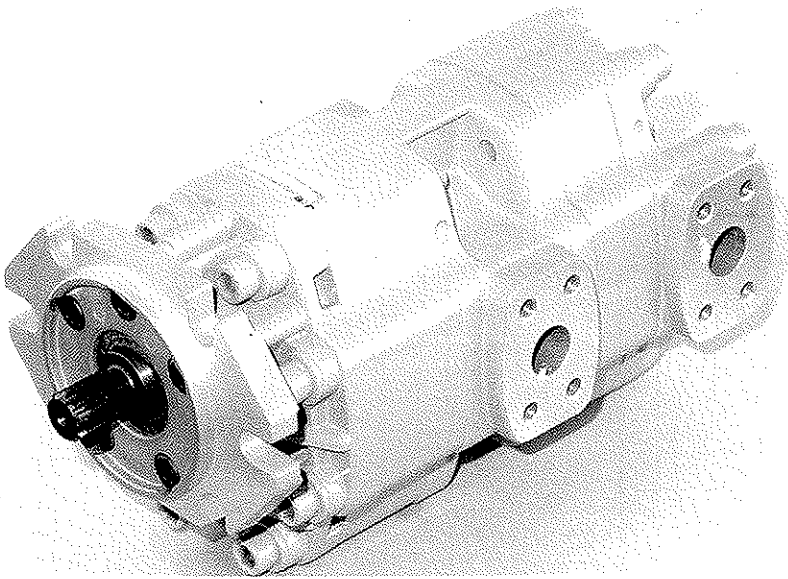
Geometric displacement ref. See "Model code"	Dimension a1, a2, a3 or a4 (mm)
20	30,0
25	33,0
32	37,5
40	43,0
50	49,5
63	58,0

Multiple pump arrangement	Dim's A
Double (outlet)	$221,5 + a1 + a2$
Triple (outlet)	$301,5 + a1 + a2 + a3$
Quadruple (outlet)	$381,5 + a1 + a2 + a3 + a4$

All other dimensions and mounting flange, outlet port and shaft end options as for single pumps.

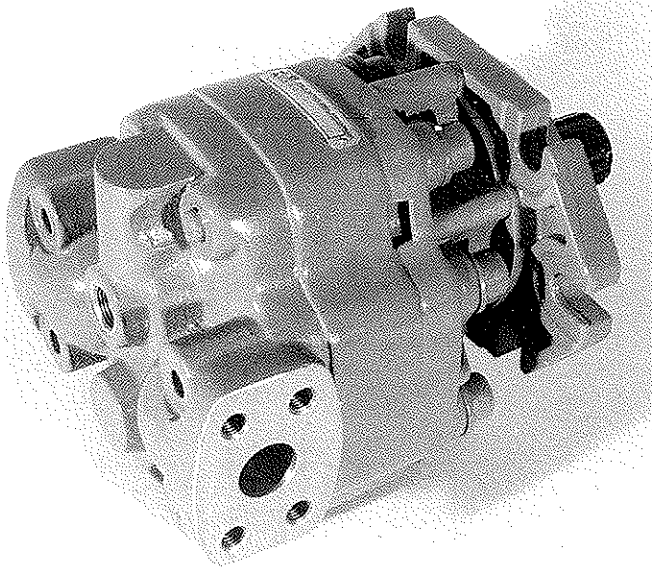
G25 double pump

(see this data sheet)

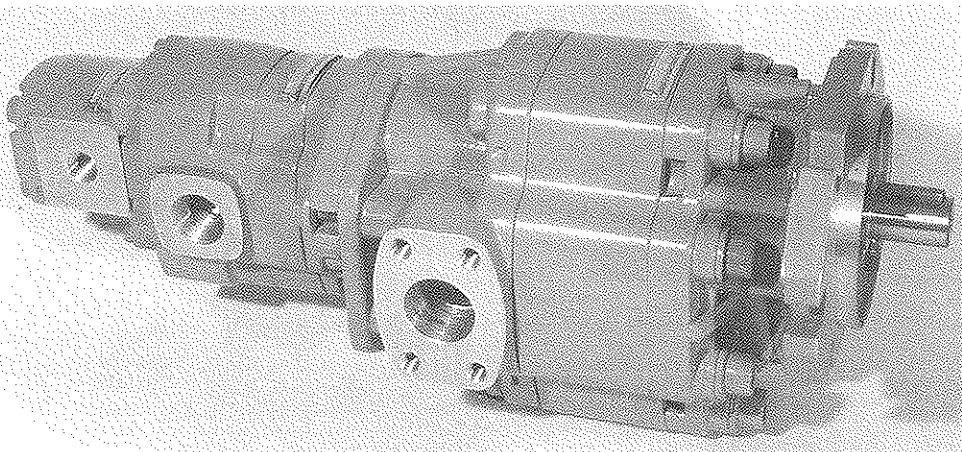


GM25 gear motor

(see separate data sheet)



**GT25 through-drive
shaft type pump with
rear adapter flange**
for mounting of additional
pumps or other rotating groups
(see separate data sheet)



The right to modifications for technical improvements is reserved.